

### **Amendments to the Specification:**

Please delete the paragraph at page 3, line 5 and replace it with the following amended paragraph:

**The figure**Figure 1 depicts an apparatus for forming a connective tissue equivalent.

Please delete the paragraph at page 9, line 18 through page 10, line 12 and replace it with the following amended paragraph:

A dermal equivalent is cast directly on the bottom surface of a tissue culture dish; directly on a porous member, such as a liquid permeable membrane; or an acellular, hydrated collagen gel using procedures in accordance with the aforementioned teachings of Kemp, et al. and as described hereinafter. A casting mixture containing collagen and fibroblasts is added to inner container 20 over an acellular, hydrated collagen gel 25 and maintained under conditions that enable the tissue equivalent to form. As the tissue equivalent forms on an acellular, hydrated collagen gel 25, it contracts radially. Typically, the sides of the dermal layer 26 slope towards the outer periphery of hydrated collagen gel 25 to form a mesa as shown in **the figure**Figure 1 at 52. The concentration of collagen, the number of cells and the volume of the casting mixture can be controlled to optimize the diameter and thickness of the living tissue equivalent. The casting mixture comprises cells at a concentration of about  $1.25 \times 10^4$  to about  $5 \times 10^4$  cells/ml and collagen at about 0.5 to about 2.0 mg/ml in a nutrient medium. A preferred cell concentration is about  $2.5 \times 10^4$  cells/ml. The cultures are maintained in an incubator to ensure sufficient environmental conditions of controlled temperature, humidity, and gas mixture for the culture of cells. Preferred conditions are between about 34 °C to about 38 °C, more preferably  $37 \pm 1$  °C with an atmosphere between about  $5-10 \pm 1\%$  CO<sub>2</sub> and a relative humidity (Rh) between about 80-90%. Once the collagen lattices have contracted, they may be used for surgical applications to treat a patient in need of tissue repair or replacement.

Please delete the paragraph on page 14, lines 17-22 and replace it with the following paragraph:

An apparatus similar to that shown in **the figure**Figure 1 was used in conducting the work described herinafter. The cover is removed for conducting operation but is otherwise kept in place to maintain sterility. Pertinent information regarding the apparatus is listed: Outer

container 10 has a diameter of 100 mm or more. The inner container 20 has a diameter of 75 mm. The permeable member 24 consists of a polycarbonate membrane with a pore size of about 3  $\mu\text{m}$  (micron) and a thickness of 5  $\mu\text{m}$  (micron).